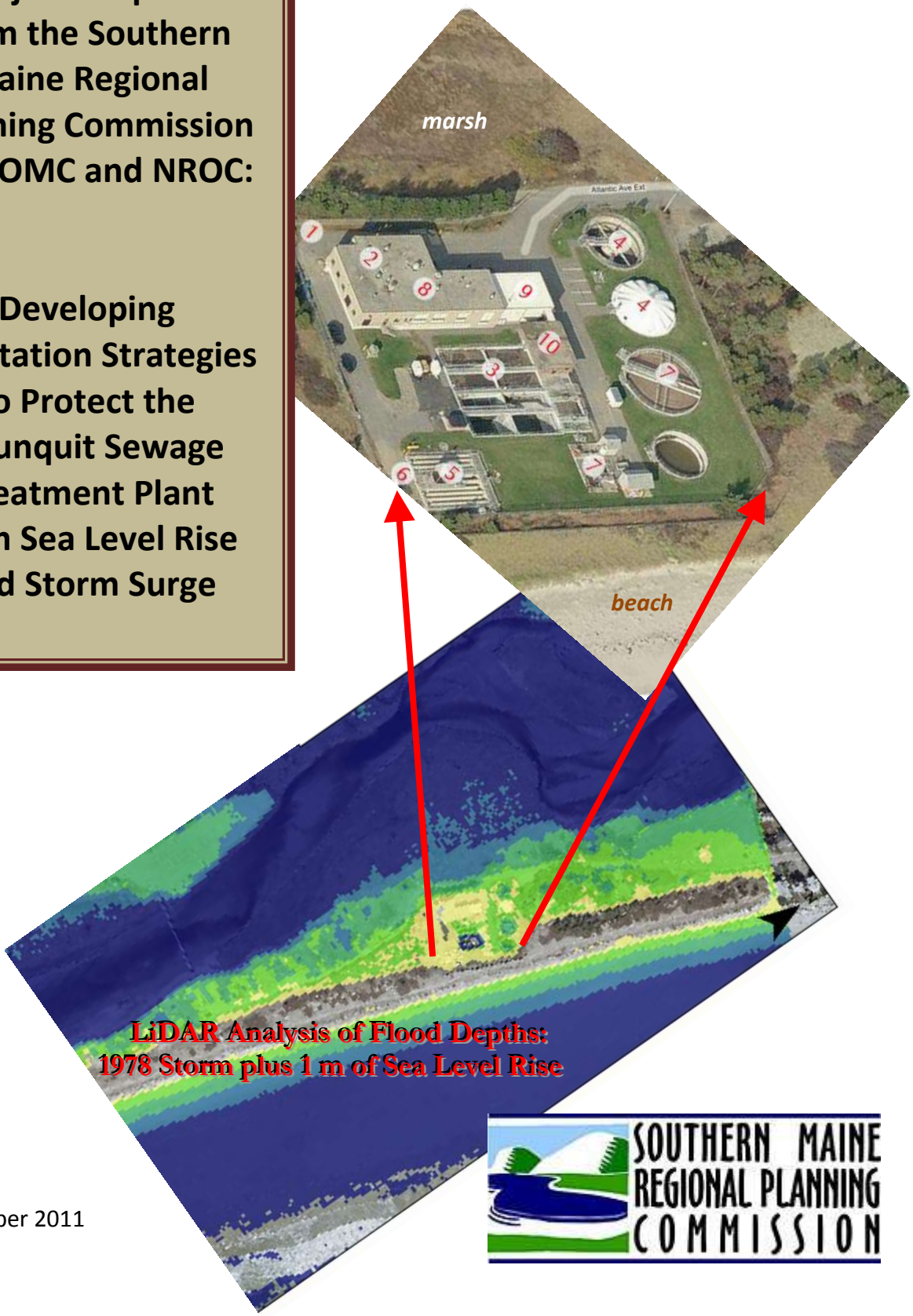
Project Proposal from the Southern Maine Regional Planning Commission for GOMC and NROC:

Developing Adaptation Strategies to Protect the Ogunquit Sewage Treatment Plant from Sea Level Rise and Storm Surge



10 November 2011

SOUTHERN MAINE REGIONAL PLANNING COMMISSION

Project Proposal
from the Southern Maine Regional Planning Commission (SMRPC)
for the Gulf of Maine Council on the Marine Environment (GOMC)
and the Northeast Regional Ocean Council (NROC)

Developing Adaptation Strategies to Protect the Ogunquit Sewage Treatment Plant from Sea Level Rise and Storm Surge

Introduction. Thank you for this opportunity to submit our proposal in response to your request dated September 7, 2011. As part of the NOAA Section 309-funded Coastal Hazard Resiliency Tools (CHRT) project, the Maine Geological Survey (MGS) and the SMRPC have worked with the Town of Ogunquit to identify potentially vulnerable areas of the built and natural environments to sea level rise (SLR). This work, completed in 2011, identified the Ogunquit Sewage Treatment Plant as one of the most valuable pieces of public infrastructure in York County that is vulnerable to SLR. Scenarios created by Maine Geological Survey during the CHRT, indicate that, with an additional 1 meter of sea level rise, the Main Treatment Plant potentially would be flooded with approximately 4 feet of salt water from the adjacent salt marsh, during a future storm event equal to the historic 1% storm event ("100-year storm"). (See Cover and Figure 1.)

Over the past century, the Portland Maine tidal station (NOAA CO-OPs station #8418150) has recorded a sea level rise of about 7 inches or approximately 1.9 mm per year. Since 1978, when Maine's storm of record hit (the February 7, 1978 storm), the Portland Tide Gauge indicates that mean sea level has already has risen approximately two and a half inches since then, which will lead to a faster return of another such 100-year storm. This is because there is only a 1 foot difference between the "100-year storm" water level and the "10-year storm" water level. Our proposed project will develop a series of adaptation recommendations for protection of the main sewage treatment plant of the Ogunquit Sewer District, as well as its associated pumping stations, in the face of higher predicted SLR and storm surges.

Applicant Eligibility. The Southern Maine Regional Planning Commission (SMRPC) is a Council of Governments, Regional Planning Commission, and non-profit corporation, established pursuant to the laws of Maine and executive orders, in existence since 1964. The Town of Ogunquit is a coastal municipality pursuant to the Maine Coastal Program.

Project location. State of Maine, County of York, Town of Ogunquit, Main Sewage Treatment Plant, at the terminus of Ocean Avenue. The Plant is located on North Beach, between Footbridge Beach, Ogunquit, and Moody Beach, Wells. See http://maps.google.com/maps?q=Moody+Beach,+Wells,+ME&hl=en&ll=43.266409,-70.588982&spn=0.004469,0.006866&sll=43.495729,-70.441257&sspn=0.012001,0.01884&vpsrc=0&t=h&hnear=Moody+Beach,+Wells,+York,+Maine&z=17
The sewage treatment plant is located at a relatively low elevation, at North Beach, on the narrow barrier island between the Ogunquit River estuary to the west and the Gulf of Maine to the east. (See Cover Photo.) Footbridge Beach is to the South and Moody Beach in the Town of Wells is to the North. The treatment plant is located within the coastal sand dune system, as classified by the Maine Department of Environmental Protection. The Dunes to the south of the plant are identified by Maine Department of Inland Fisheries and Wildlife as a Nesting Site for Piping Plovers, an endangered species. The Ogunquit River estuary system is part of the Rachel Carson National Wildlife Refuge, and contains operating clam flats. Many of the systems pump stations are also located in low-lying areas susceptible to sea level rise and storm surge. The footbridge parking area pump station, located at the edge of the

estuary across from the main treatment plant, was flooded in April 2007 during the Patriot's Day storm. (See Figure 2, and Letter of Support #2, from Philip Pickering.)

Goals of the project.

1. Develop a request for proposals to seek an engineering firm to study the vulnerabilities of the Ogunquit Sewage Treatment Plant and associated pumping stations to sea level rise and storm surge, and identify a range of adaptation strategies, and estimate rough costs. Data created by MGS and SMRPC as part of the CHRT project will be used to help determine existing and future vulnerabilities, and will help inform further engineering and modeling efforts. If funding permits, the engineering firm also will be asked to produce dynamic modeling of runup and wave heights, as MGS scenarios only include static inundation.
2. Select and hire a firm to produce said report.
3. Engage the public in Ogunquit by conducting a citizen participation process to educate about the sewage treatment plant vulnerabilities and the options for adaptation strategies.
4. Select identified adaptation strategies, and seek funding opportunities and add to capital planning processes.

Proposed approach and methods for achieving project goals.

1. SMRPC's planning director will work with the Sewer District Superintendent and Trustees to develop an RFP to select and engineering firm for the study. The Sewer District Trustees will select the engineering consultant.
2. Once the report is produced, the Ogunquit Sewer District Trustees and the SMRPC will coordinate the publication of the report findings with a variety of public outreach efforts through a newsletter or mailing. A citizen participation process will also be created, including public meetings and cable television broadcasts on WOGT, through the involvement of the Town of Ogunquit sea level adaptation committee, currently being considered for formation by the Ogunquit Board of Selectmen. The proposed town sea level committee will also have a representative from the Sewer District.
3. The Ogunquit Sewer District will make a decision on which adaptation strategies to pursue, based upon input from the Town sea level adaptation committee, with input from State agencies having jurisdiction on effected resources.
4. The results of this effort may be used as a case study to assist other Sewer Districts facing sea level adaptation issues, and will hopefully be widely shared.

Note: See Table 1 for detailed time-line with anticipated completion dates.

GOMC/NROC Strategies Implemented.

Our proposed project will implement at least two of the strategies set forth in the RFP, as eligible for grant funding:
Strategy 4. Mapping and assessing vulnerable public infrastructure and natural resources.
Strategy 5. Increasing public awareness of climate change and support for coastal hazards adaptation measures.

Existing and likely project partners and community support. The Ogunquit Sewer District (OSD), and the Town of Ogunquit, and the Ogunquit Conservation Commission have provided letters of support, and the OSD and Town will share the appropriation of a cash match for the project. The Ogunquit Sewer District superintendent will become part of the project staff, and will provide direct experience and knowledge of infrastructure vulnerabilities. The Maine Geological Survey has agreed to provide its Marine Geologist advisor to the project regarding sea level rise and storm surge scenarios and assumptions.

If the grant is awarded, the project will continue to seek additional partners, enlisting the assistance of the Maine Department of Environmental Protection (DEP), the Maine Department of Inland Fisheries and Wildlife (DIFW), and the Rachel Carson Wildlife Refuge. Technical assistance will be sought from these agencies, as well as from the Ogunquit Conservation Commission, on potential impacts of inundation on wildlife and habitats, as well as on potential impacts of any suggested adaptation measures.

The Towns of York and Wells also have interest in the project, as plant and pump station inundation could affect adjacent neighborhoods in Wells, and the OSD also serves some customers located in northern York.

Opportunities or challenges potentially influencing project success.

1. Information has already been developed for the vulnerability of the plant by Maine Geological Survey, and the community is mobilized to take action, both at the Sewer District and at Town Hall.
2. The proposed project builds upon information developed in a previously successful NOAA -funded project. See the attached images from the completed CHRT project.
3. The Sewage Treatment Plant is very close to existing neighborhood in Wells, which is a neighboring jurisdiction.
4. The Plant is near to Essential Habitat for an Endangered Species, namely the Piping Plover, and is located in the coastal sand dune system as mapped by the Maine Department of Environmental Protection.
5. The Plant is adjacent to the Rachel Carson National Wildlife Refuge and active clam flats.
6. MGS has developed static inundation scenarios at the treatment plant location, but no dynamic inundation modeling has been performed.

Total funds requested and match. The total project cost will be $36,000. The requested grant award from GOMC/NROC will be $30,000. The Town of Ogunquit and OSD will provide a $6,000 match, if the grant is awarded. Contributions to the matching fund will be shared between the partners, pending approvals through their respective budgeting procedures. Together with the requested grant award of $30,000, the total proposed project budget will therefore be $36,000. (See Table 2 – Budget.)

Project Staff Team.

Local Project Manager and Point of Contact: Jonathan T. Lockman, AICP, Planning Director, SMRPC, 21 Bradeen Street, Suite 304, Springvale, ME 04083, jlockman@smrpc.org, 207-324-2952 x.14.
J.T. Lockman has served as the consulting town planner for the Town of Ogunquit for ten years. He has assisted the Town with updating its comprehensive plan, completely rewriting its zoning ordinance and subdivision regulations, and advising the Planning Board on countless development reviews. He served as lead planner on the Coastal Hazard Resiliency Tools Project (CHRT), which was funded by NOAA section 309 funds, and brought information on sea level rise vulnerability to the Ogunquit community early in 2011. This major success of the CHRT effort, has led to this proposal to study adapting the OSD infrastructure to sea level rise. If this project is selected, J.T. is willing to serve on the advisory group made up of members other GOMC/NROC grantee communities, and to share results and products. (See J.T.'s resume, Attachment 1.)

Marine Geologist: Peter A. Slovinsky, Marine Geologist, Maine Geological Survey. Pete Slovinsky has worked with J.T. Lockman for four years on two major sea level rise initiatives funded through NOAA/Maine Coastal Program, the CHRT and the Saco Bay Sea Level Adaptation Working Group (SLAWG). His wonderful GIS analyses and presentations using LiDAR analysis to demonstrate potential

inundation from storms and SLR have inspired Ogunquit citizens and political actors to take action, with this proposal. Pete's research on the geology and health of Ogunquit Beach make him the premier scientist on the ground in this area. (See Pete's resume, Attachment 2.)

Sewer District Superintendent: Philip A. Pickering, Superintendent, Ogunquit Sewer District. Phil has served in all capacities at the OSD since 1985. He knows every inch of the system, and has lived through many storm events at North Beach in Ogunquit. No one is better equipped to foresee the potential effects of SLR and storm surge on Ogunquit's sewer infrastructure, and to judge what adaptation measures might prove to be effective. Phil will work on the RFP to select a consulting engineer, should this proposal be funded. (See Phil's resume, Attachment 3, and Letter of Support, Attachment 5.)

Ability to Implement Results. The citizens of Ogunquit and rate-payers of the OSD have a proven track record of rallying to protect their beach, the piping plovers and their habitats, and investing in public infrastructure, when necessary. The artificial dune system, which was installed in 1974 to protect the beach, is illustrative of this commitment. Already, the Footbridge Pump Station has been improved in the very first effort to adapt and increase the community's resiliency in the face of storm surges. Through the CHRT project, it appears that the community is ready to mobilize again, and is willing to now explore and estimate the cost of sea level adaptation measures. This project will include a citizen participation effort, with educational outreach, so that implementation of identified adaptation methods will be successful.

Applicability of project as a model for others. It appears that many sewage treatment plants were established in the second half of the 20th century in vulnerable, low-lying locations, leaving them exposed to storm surge and sea level rise. LiDAR analysis from the Maine Geological Survey has already discovered that the South Portland Sewage Treatment Plant is at similar risk to the Ogunquit Plant. We believe that the lessons learned during the execution of this proposal will lead to many reproducible efforts along the New England coast.

Table 1. Detailed Time-line with Anticipated Completion Dates

Project Title:	Developing Adaptation Strategies to Protect the Ogunquit Sewage Treatment Plant from Sea Level Rise and Storm Surge
State:	Maine
Community:	Ogunquit
Local Project Manager:	J.T. Lockman AICP, Planning Director, SMRPC
Full Contact Information:	Southern Maine Regional Planning Commission 21 Bradeen Street, Suite 304 Springvale, ME 04083 Voice: 207-324-2952 x 14; Email: jlockman@smrpc.org
Date Submitted:	11/10/2011

PROJECT TIMELINE TABLE (JANUARY 2012 – JUNE 2013)

Tasks	**Products**	**Milestones**
Develop a RFP to seek an engineering firm to study the vulnerabilities of the Ogunquit Sewage Treatment Plant and pumping stations, and to identify a range of adaptation strategies and estimate rough costs	RFP	Sent out Feb 28, 2012
Interviews and Select Consultant	Contract executed	March 31, 2012
Report Creation by Selected Engineering Firm	Report Published	August 31, 2012
Public Outreach - Citizen Participation Process	Newsletters, Public Meetings, Television Show Production, Internet Survey (WOGT)	End Date of Efforts: December 31, 2012
Decision-making on Preferred Alternatives for Adaptation by OSD, input from permitting authorities and partners	Public Meetings	End Date of Efforts: June 30, 2013
Collaborate with other GOMC/NROC Grantees	Meetings, Website Uploads, Actions as requested by Funders	Ongoing through Grant Period

Table 2. Budget

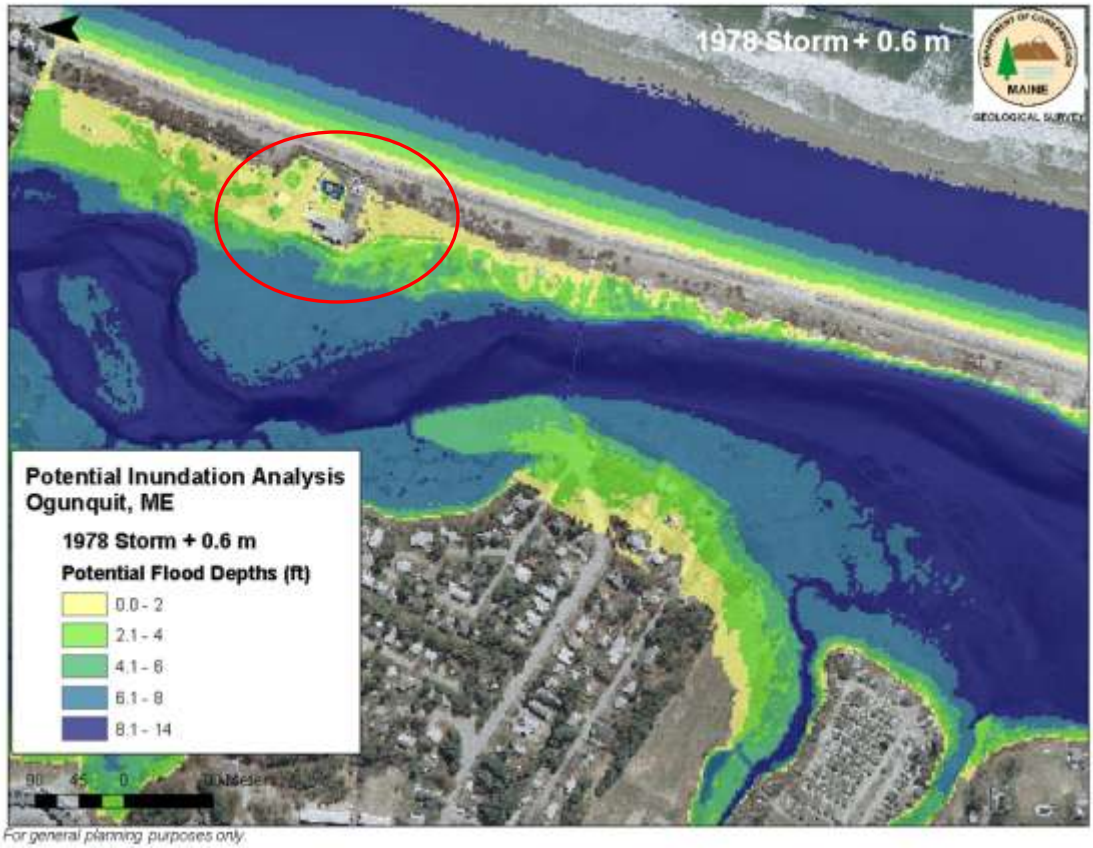
Project Title:	Developing Adaptation Strategies to Protect the Ogunquit Sewage Treatment Plant from Sea Level Rise and Storm Surge
State:	Maine
Community:	Ogunquit
Local Project Manager:	J.T. Lockman AICP, Planning Director, SMRPC
Full Contact Information:	Southern Maine Regional Planning Commission 21 Bradeen Street, Suite 304 Springvale, ME 04083 Voice: 207-324-2952 x 14; Email: jlockman@smrpc.org
Date Submitted:	11/10/2011

BUDGET TABLE

Tasks	USGOMA Grant Funds	Source of Match	Match Non-Federal	Disbursement to Payee	Total
Develop a RFP to seek an engineering firm to study the vulnerabilities of the Ogunquit Sewage Treatment Plant and pumping stations, and to identify a range of adaptation strategies and estimate rough costs	3,500			OSD-2,500 SMRPC-1,000	3,500
Interviews and Select Consultant	1,000			OSD-1,000	1,000
Report Creation by Selected Engineering Firm	19,000	Town of Ogunquit/ Ogunquit Sewer District	6,000	Engineering Consultant-25,000	25,000

Tasks	USGOMA Grant Funds	Source of Match	Match Non-Federal	Disbursement to Payee	Total
Public Outreach - Citizen Participation Process	3,500			SMRPC – 3,500	3,500
Decision-making on Preferred Alternatives for Adaptation by OSD, input from permitting authorities and partners	2,000			OSD – 2,000	2,000
Collaborate with other GOMC/NROC Grantees	1,000			SMRPC- 1,000	1,000
Totals	**$30,000**		**$6,000**	**OSD-5.5K SMRPC -5.5K Engineering - 25K**	**$36,000**

Figure 1 – Plant shown inundated with a Scenario of a Storm Equivalent to the 1978 Storm, plus 0.6 or 1 meter of Sea Level Rise



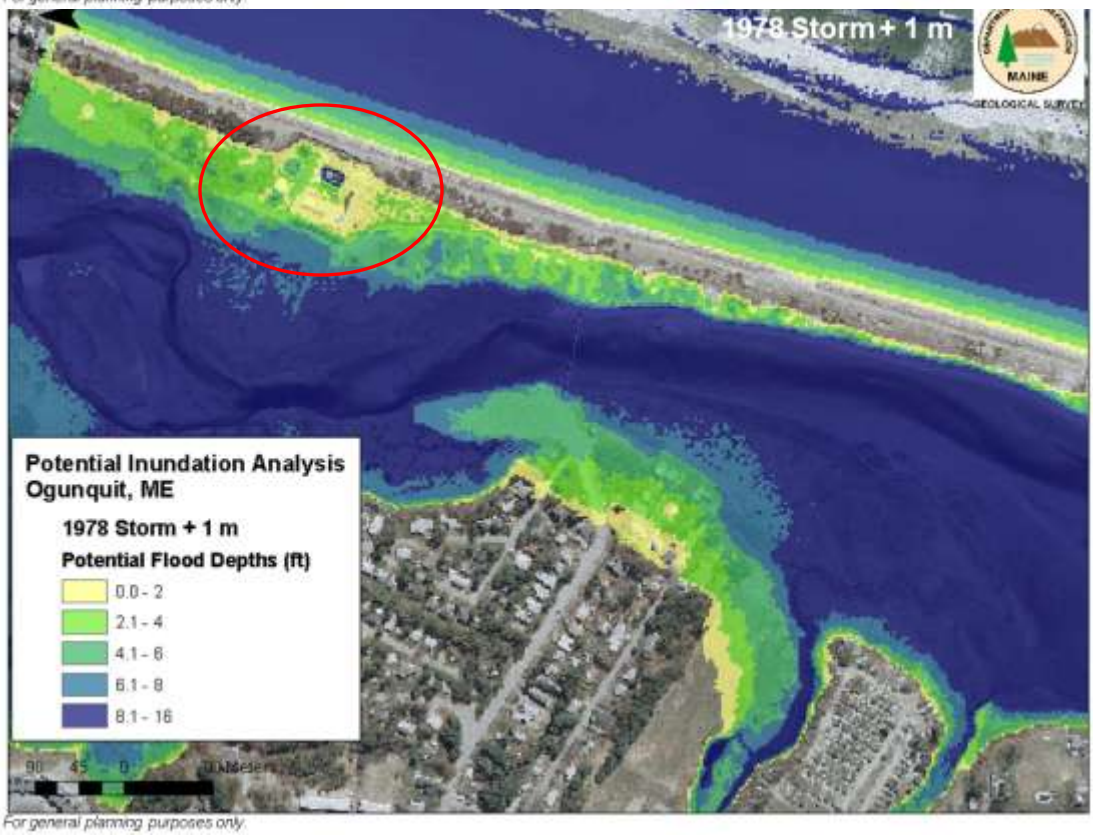
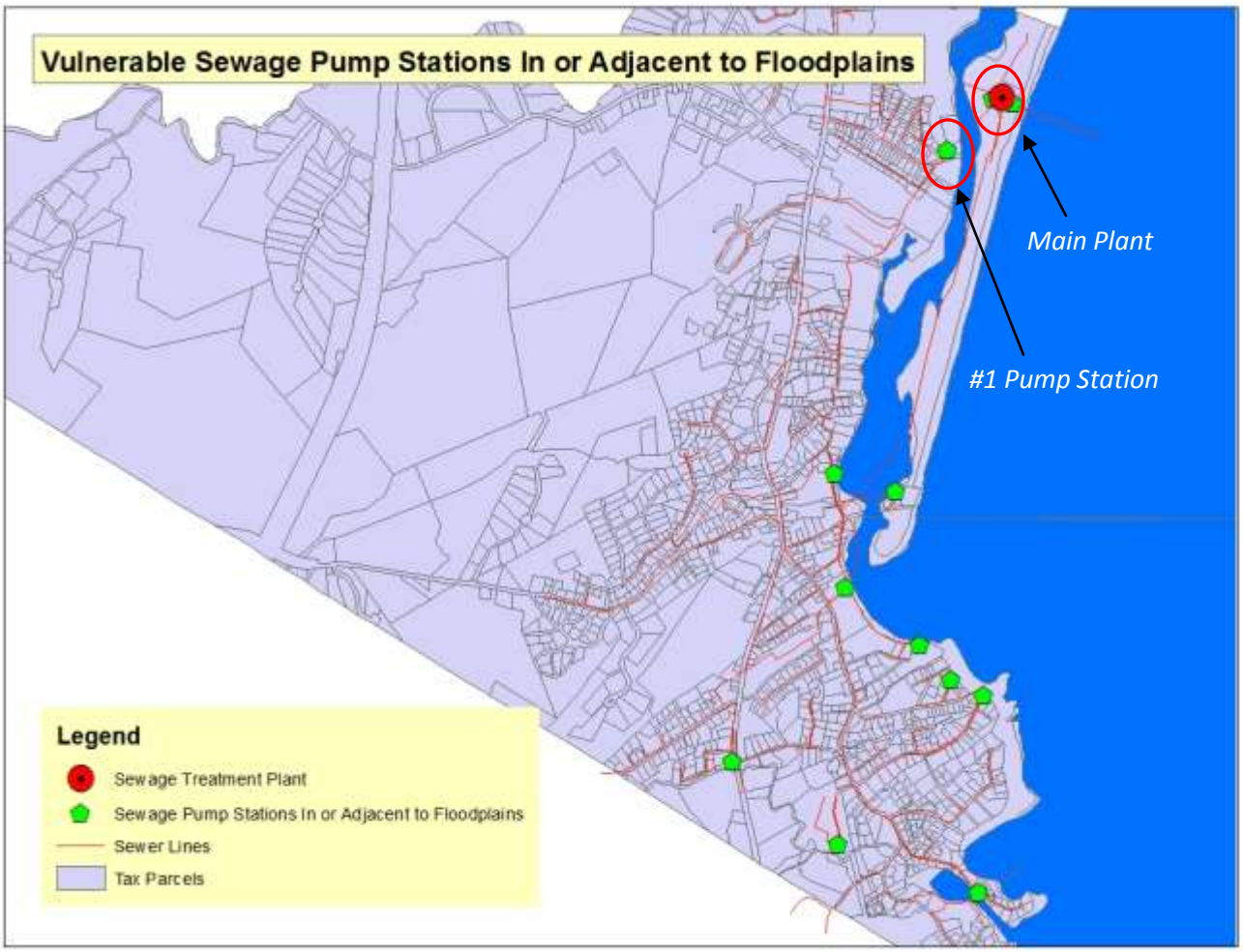


Figure 2–Sewage Pump Stations Vulnerable to Storm Surge and Sea Level Rise.
Note the area of the Main Plant circled in red. Scenarios of potential depths at pump stations has yet to be run, but the #1 Pump Station near across from the Main Plant at the Footbridge Beach Parking Lot was flooded in the Patriot's Day storm of April 2007. See letter from Sewer Superintendent, Attachment 3.



Attachment 1 – <u>Resume of Local Project manager</u>

Jonathan T. Lockman, AICP, Planning Director

EDUCATION

***University of North Carolina**, Chapel Hill, NC* *1987*
MASTER OF REGIONAL PLANNING (VALEDICTORIAN)
Concentration: Land Use and Environmental Planning
Thesis: The Feasibility of an Impact Fee System for Winston-Salem/Forsyth County, NC

Cornell University, Ithaca, NY *1980*
BACHELOR OF SCIENCE (WITH DISTINCTION)
Major: Science and Environmental Education

PROFESSIONAL EXPERIENCE

Southern Maine Regional Planning Commission *1999 - Present*
PLANNING DIRECTOR

- *Department Head for Planning and Geographic Information System Services.*
- *Provides Technical Assistance and Development Review service for Code Enforcement Officers and Planning Boards throughout the Southern Maine Region.*
- *Provides ordinance and comprehensive plan writing services on a consulting basis. Analyzes and provides comments on legislative initiatives that relate to community and regional planning.*
- *Facilitates meetings between municipalities on regional issues.*
- *Develops and/or revises manuals and other technical publications to assist with municipal or regional planning.*

Town of Wells, ME *1996 - 1999*
TOWN PLANNER

- *Served as Town Department Head for the Office of Planning and Development.*
- *Advised the Planning Board, Appeals Board, Capital Improvements Program Committee, Economic Development Committee, and the Board of Selectmen on all matters relating to municipal and regional planning and capital budgeting.*
- *Implemented a new 7000 parcel Arcview Geographic Information System for township. Town Representative to the regional Coastal Resources Stakeholder Group (AKA the Beach Erosion Task Force) culminating in the report "Improving Maine's Beaches," April 1998, presented to the Governor's cabinet*
- *Support to Town Manager and Town Attorney on Wells Harbor Dredging and Beach Renourishment Project.*
- *Provided Technical Assistance to the Wells Conservation Commission and Wells National Estuarine Research Reserve on mapping and a variety of natural resources management issues.*
- *Lead Staff Person for site plan reviews of regional importance, including a new campus for York County Technical College, major expansion for Spencer Press, Inc., the new multi-modal transportation center for the Maine Turnpike Authority, a 30" Liquefied Natural Gas pipeline and storage facility, and a quarry expansion for Pike Industries.*

Town of Bar Harbor, ME *1988 - 1996*

PLANNING DIRECTOR

- *Served as Town Department Head for Planning Department*
- *Advised the Planning Board, Appeals Board, Building Code Board of Review, Comprehensive Plan Committee, and Town Council, on all matters relating to municipal and regional planning.*
- *Directed development of the newest Town of Bar Harbor Comprehensive Plan, adopted in November 1993.*
- *Worked with the Town Attorney to rewrite the Bar Harbor Land Use Ordinance originally adopted in 1986.*
- *Served as Acting Code Enforcement Officer, as needed.*
- *Worked with College of the Atlantic to produce a Geographic Information System for Bar Harbor and surrounding Mount Desert Island Towns.*
- *Supported Acadia National Park officials on matters regarding land acquisition and deletion, as well as other aspects of the implementation of the Park's general management plan. Coordinated Site Plan reviews for various resort developments*
- *Represented Bar Harbor at regional planning meetings, including the Hancock County Planning Commission, the D.O.T. Route 3 Transportation Corridor Study, and the Mount Desert Island League of Towns. Handled media relations regarding Town planning issues.*

City-County Planning Board of Forsyth County and Winston-Salem, NC *1987 - 1988*

PROJECT PLANNER

- *Lead planner for South Stratford Road and Muddy Creek Area Plans, complete studies of rapidly growing suburban area of Winston-Salem.*
- *Conducted extensive citizen participation meetings.*
- *Presented staff recommendations to the Planning Board, City Board of Aldermen, and County Commissioners.*
- *Estimated land acquisition costs for Salem Lake Watershed Protection Program.*

BOARD MEMBERSHIPS, CERTIFICATIONS, AWARDS

- American Institute of Certified Planners, Member since 1988
- American Planning Association, Resort and Tourism Division Chair, Secretary/Treasurer, 1993 to 2008
- Maine Association of Planners, Past President and Board Member
- Maine Association of Planners, Planner of the Year, 2005
- Member of Legislative Stakeholder Task Force on Shoreland Zoning, present
- Member of Legislative Task Force on Growth Management, 2000
- Member of Legislative Task Force on Improving Maine's Beaches, 1998
- Certified Code Enforcement Officer, Licensed Plumbing Inspector, Rule 80K Prosecutor, State of Maine, 1989-1999
- Eastern Trail Association Board Member, 1998 - 1999
- Hancock County Planning Commission, Executive Board Member, December 1995 – September 1996

Attachment 2- Resume of Peter A. Slovinsky

Peter A. Slovinsky, Marine Geologist

EDUCATION

***University of South Carolina**, Columbia, SC* *2001*
MASTER OF SCIENCE, GEOLOGICAL SCIENCES

***Franklin and Marshall College,** Lancaster, PA* *1995*
BACHELOR OF ARTS
Major: Geosciences

PROFESSIONAL EXPERIENCE

***Maine Geological Survey, Department of Conservation**, Augusta, ME*
MARINE GEOLOGIST *2009 - Present*
SENIOR GEOLOGIST *2003 - 2009*
COASTAL MANAGEMENT FELLOW *2001 – 2003*

- *Develop coastal hazard resiliency data and engage/partner with local, regional, and state entities for furthering coastal resiliency and adaptation to sea level rise impacts.*
- *Map erosion hazard areas, prepare coastal hazard mitigation plans, analyze coastal processes, sediment transport, beach erosion and accretion, storm currents, tides, and waves.*
- *Develop, integrate, and maintain MGS Near-shore Surveying System.*
- *Conduct RTK-GPS surveying and mapping of beach erosion hazards and geomorphic characteristics in support of the Maine Beach Mapping Program.*
- *Develop local and regional beach management, mitigation, and adaptation strategies. Serve as representative on several multi-state (NROC) and international (ESIP) coastal hazards and climate change committees.*
- *Participate in regional workshops and efforts relating to coastal hazards and sea level rise. Develop beach management policies within the State.*
- *Develop beach and current surveying programs.*
- *Provide guidance for local, regional, state, and multi-state level decision-making regarding the coastal environment and impacts from climate change.*
- *Educate the public on coastal hazards.*

***University of South Carolina,** Columbia, SC* *1999 – 2001*
RESEARCH ASSISTANT

***J.L. Lomax & Associates**, Cape May Court House, NJ* *1995 – 1999*
ENVIRONMENTAL ANALYST

RELEVANT PUBLICATIONS OR PRESENTATIONS:

Slovinsky, P.A., and Dickson, S.M., 2011, *State of Maine's Beaches in 2011*, Maine Geological Survey Open-File Report, Augusta, ME. http://www.maine.gov/doc/nrimc/mgs/explore/marine/beaches11/contents.htm

Slovinsky, P.A., and Lockman, J.T., 2011, *Adapting to Sea Level Rise*, American Planning Association National Conference, Boston, MA.

Slovinsky, P.A., 2010, *Using LIDAR to Monitor Beach Changes: Gooch's Beach, Kennebunk, Maine*, Maine Geological Survey Site of the Month, February, 2010. http://www.maine.gov/doc/nrimc/mgs/explore/marine/sites/feb10.htm

Slovinsky, P.A., and Dickson, S.M., 2009, *Assessment of LIDAR for Simulating Existing and Potential Future Marsh Conditions in Casco Bay*, Casco Bay Estuary Partnership, October, 2009, 26 pp. http://www.maine.gov/doc/nrimc/mgs/explore/marine/lidar-casco/casco.pdf

Slovinsky, P.A., and Dickson, S.M., 2006, *Impacts of Future Sea Level Rise on the Coastal Floodplain*, Maine Geological Survey Open-File 06-14, Augusta, ME. http://maine.gov/doc/nrimc/mgs/explore/marine/sea-level/contents.htm

SYNERGISTIC ACTIVITIES:

Coastal Hazards:

- New England-Canadian Maritime Collaborative Planning Initiative Coastal Hazards Planning Workshop Participant (2010)
- Coastal Hazard Resiliency Tools project (project coordination and support, 2007-2010)
- Northeast Regional Ocean Council Coastal Hazards committee member (2008-2010)
- Maine Coastal Program partner (interagency coastal zone management group; 2001-present)
- Maine Beaches Advisory Group (staff support, 2006-present)
- Saco Bay Implementation Team (hazard mitigation team of citizens, municipal, and state government agencies; 2001-present)
- Coastal Sand Dunes Stakeholder Group (sea level policy incorporated into state law; diverse membership of government and NGOs; 2004-2006)
- Maine Emergency Management Agency (team to rewrite Maine natural hazards aspect of State Hazard Mitigation Plan, including erosion, landslides, tsunamis, earthquakes, and flooding, 2006, 2010)

Climate Change:

- Maine Climate Change Adaptation Coastal Environment Working Group member (2010)
- Sea Level Rise and Inundation Community Workshop participant (NOAA/USGS, 2009)
- Ecosystem Indicator Partnership Climate Change Subcommittee member (2008-2010)
- Educational DVD *Building a Resilient Coast: Maine Confronts Climate Change* scientific advisor (2009)

Reviewer of research proposals: *NOAA*

Philip A. Pickering, Superintendent, Ogunquit Sewer District

EDUCATION AND CERTIFICATIONS

***Southern Maine Technical College**, South Portland, ME* *1988*
COURSEWORK IN WASTEWATER TECHNOLOGY

***Northern Maine Technical College,** Presque Isle, ME* *1982*
ASSOCIATES DEGREE IN INDUSTRIAL ELECTRICAL TECHNOLOGY

Maine Wastewater Treatment Plant Operator Licenses, Grades II and III *1987*
Maine Wastewater Treatment Plant Operator License, Grade V *1993*

PROFESSIONAL EXPERIENCE

***Ogunquit Sewer District**, Ogunquit, ME*
LABORER, OPERATOR, CHIEF OPERATOR, PLANT MANAGER, SUPERINTENDENT *1985 - Present*

- Plans, organizes, and supervises the wastewater system operations, treatment plant maintenance, and the treatment plan laboratory.
- Coordinates all activities relating to the U.S. Environmental Protection Agency and the Department of Environmental Protection.
- Insures implementation of and/or compliance with federal and state regulations governing all wastewater treatment programs.
- Insures all treatment plant and collection system functions are performed following established procedures, including laboratory tests.
- Performs routine laboratory tests including sampling of plant influent partially treated wastewater, sludge, effluent, and by-products to monitor process control and equipment operation.
- Makes quantitative and qualitative chemical, bacteriological, physical, biological analysis of test results.
- Recommends specifications for major equipment and material purchases.
- Conducts hiring process including recruitment and selection of employees; conducts employee orientation programs and employee performance evaluations; conducting training programs.
- Develops and implements all employee safety training programs.
- Supervises the maintenance of the material, inventory and equipment use records; requisitions supplies and materials; and prepares budget estimates of department operations.
- Represents the treatment plant to outside agencies, industry, professional organizations, citizens, engineers, contractors, suppliers.
- Maintains effective communications and working relationships with Trustees, employees, government officials, sewer users, and the general public.
- Maintains daily logs and records of treatment plant facility activities; prepares reports as required.

***Lincoln Pulp & Paper ,** Lincoln, ME* *1983– 1985*
WASTEWATER TREATMENT

LETTERS OF SUPPORT

Attachment 4 – Letter of Support: Ogunquit Sewer District Trustees

Attachment 5 – Letter of Support: Ogunquit Sewer District Superintendent

Attachment 6 – Letter of Support: Town of Ogunquit

Attachment 7 – Letter of Support: Ogunquit Conservation Commission

Attachment 8 – Letter of Support: Rachel Carson National Wildlife Refuge

Ogunquit
SEWER DISTRICT

Office: 207.646.2028
Plant: 207.646.3271
Fax: 207.646.8783

Address: PO Box 934
Ogunquit, ME 03907
Email: info@ogunquitsewerdistrict.org
Web: www.ogunquitsewerdistrict.org

Jonathan T. Lockman
Southern Maine Regional Planning Commission
21 Braden St., Suite 304
Springvale, ME 04083

New England Municipal Coastal Resilience Initiative

Dear JT:

The Ogunquit Sewer District Trustees are fully committed to the New England Municipal Coastal Resilience Initiative project and required matching funding. We believe this is an important opportunity for the District to fully understand and plan for the impact of sea level rise on our treatment facility and pumping stations. We expect this data to provide a template for sound long term planning which will enable us to continue providing service to our municipality while protecting our environment, waterways and beach.

We are especially excited to realize that this study will provide significant data applicable to other similarly situated districts across New England. Treatment plants have traditionally been located in low lying areas to facilitate pumping. This has resulted in many plants adjacent to waterways and environmentally sensitive areas. We believe that the Ogunquit study can assist many other districts in recognizing and addressing the potential problems faced by sea level rise and flooding.

Given the financial structure of municipal sewer districts, long-term capital planning is essential to ensure we can bond and support required upgrades to equipment, pumps and lines. This study has the potential to ensure the district can properly plan, budget and fund steps necessary to maintain safe, environmentally sound operations as we face the potentially expensive challenges of sea level rise into the twenty first century.

Sincerely,

Robert S. Joyner,
Chair
Ogunquit Sewer District Trustees

Ogunquit
SEWER DISTRICT

Office: 207.646.2028
Plant: 207.646.3271
Fax: 207.646.8783

Address: PO Box 934
Ogunquit, ME 03907
Email: info@ogunquitsewerdistrict.org
Web: **www.ogunquitsewerdistrict.org**

Jonathan T. Lockman
Southern Maine Regional Planning Commission
21 Braden St., Suite 304
Springvale, ME 04083

Dear. Mr. Lockman,

I believe the Town of Ogunquit would be the ideal location for a pilot study on the effects of climate change and sea level rise. Our small coastal community offers a variety of natural environments including coastal ledge outcrop, a 7500 foot long natural sand beach, frontal and back dunes and a large estuary with fresh water outlets from both the Ogunquit River and Stevens Brook. All of these sensitive eco systems can be impacted by storm surge, coastal flooding and extreme rain events.

The Ogunquit-Moody barrier spit (peninsula) is the longest unbroken barrier spit in the State of Maine with commercial developments, private houses, town owned infrastructures, sewerage pumping stations and Ogunquit's wastewater treatment facility located within the dune area. In an effort to stabilize the dunes at Ogunquit a manmade barrier dune was constructed in 1974-75 and a metal sheet-pile wall was constructed to protect the wastewater treatment facility from coastal storm surge.

Ogunquit as with most sewer department's servicing coastal communities has both geology and gravity to blame for our poorly sited pumping stations and treatment plant. The district has four of our 13 pumping stations and our wastewater treatment facility located at or below the 12 foot elevation based on National Geodetic Vertical datum of 1929. We know these locations will remain vulnerable to natural weather event and the conditions are notably worsening, the time for planning for our future response is upon us.

Over the past decade a substantial shift in our weather patterns has been felt by several coastal communities and both the Town of Ogunquit and the Sewer District have received FEMA/ MEMA assistance for disaster declaration each year from 2006 through 2010. This has been at an alarming rate which has never been seen in previous decades and has taught us valuable lessons on what we can expect in the future.

As a response to these events the sewer district has expended over 2 million dollars on infrastructure improvements including forced main upgrades to increase the capacity and reliability of two pumping stations. In addition, due to the 2006 Mother's Day storm flooding, a major upgrade in 2009 was necessary to our largest pump station to replace electrical equipment, pumps and motors. I have attached a photo taken from the roof of our treatment facility looking out over the marsh area during the 2007 Patriots Day Storm. Although difficult to see the white box is our portable generator next to our pumping station #1 (below grade drywell station) located in the footbridge parking lot (shown entirely under water), both are surrounded by water and with an additional 8 to 10 inches of water level the generator and pumping station would have both flooded.

In closing I would like to mention one of the projects the Town and sewer district have already invested in which would assist in the development of a model plan for sea level and climate change. An extensive GIS mapping system has already been developed for the Town of Ogunquit including most of their storm drains, catch basins and drainage areas. The sewer district has also located all of our manholes, sewer lines and pumping station as well as elevation details on a GIS system.

Yours Truly,

Philip A. Pickering,
Superintendent, OSD


Pumping
Sta. #1
Generator

OGUNQUIT
Beautiful Place by the Sea

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23 SCHOOL STREET • P.O. BOX 875
OGUNQUIT, MAINE 03907-0875
(207) 646-5139

E-mail: townmanager@townofogunquit.org

THOMAS A. FORTIER
TOWN MANAGER

To whom it may concern:

I am pleased to write this letter of support on behalf of the Town of Ogunquit and to the Gulf of Maine Council and the Northeast Regional Council.

The Sewer District Trustees met with Town representatives to discuss the final grant application. This is for the $30,000 grant from NOAA to study the impact of sea level rise on the treatment plant. The OSD Trustees and the Ogunquit Board of Selectman voted to fully fund the $6,000 matching requirements. Based on feedback received so far, we are quite optimistic that this grant is possible.

Specifically, we would utilize the grant monies to address some of our immediate and long term concerns. For example, a 2011 study by SMRPC and Maine Geological Survey have identified the OSD Treatment plant is vulnerable to sea level rise and an engineering study will determine the impact on the treatment plant and pumping stations of expected sea level rise. The study could also develop engineering solutions to protect the plant and pumps from damage.

These steps will enable us to understand what will be required over the coming decades to protect the local environment including the beach, clam flats, the river and estuaries, the piping plover nesting areas and Rachel Carson marsh areas from flood damage to the plant or equipment.

The study results will be communicated to town officials and residents via live presentation, WOGT broadcasts and participation with the Conservation Committee and other agency officials. Residents will be engaged in possible solutions to address problems identified. The results will also facilitate OSD long term planning to minimize financial impact from sea level rise on the town and residents.

I trust that you will find our application viable and an excellent use of the funding resource of which you are offering. Please do not hesitate to contact me should you have any questions.

Sincerely,

Thomas A. Fortier
Town Manager
Town of Ogunquit

TO: J.T. Lockman, SMRPC
RE: Funding for "Developing Adaptation Strategies to Protect the Ogunquit Sewage Treatment Plant from Sea Level Rise and Storm Surge"
FROM: The Ogunquit Conservation Commission
DATE: November 3, 2011

The recent study by the Maine Geological Survey and SMRPC indicates that the Ogunquit Sewer District's Treatment Plant (OSD) as potentially vulnerable to future Sea Level Rise (SLR) which is of concern to the Conservation Commission.

Due to the vulnerable location of the OSD Plant on Ogunquit Beach and the Ogunquit River Estuary, possible future SLR and resultant calamity to the plant would result in detrimental sewerage effluent containing harmful biological and chemical pollution entering the river, estuary and surrounding natural resources.

The Estuary specifically, is home and host to many natural sanctuaries, some rare and protected such as the Piping Plover. Other habitats include horseshoe crabs, ospreys, valuable salt marshes and seagrasses. Hundreds of fish such as striped bass, salmon, flounder and shellfish, such as scallops, shrimp, and mussel, live in this estuary at some point in their life. This estuary and the land surrounding it is home to multi-natural habitats and nesting sites for shorebirds, migrating fowl and other marine species. Additionally, there are economically valuable, public working clam flats located nearby in the estuary, regulated by the Ogunquit Shellfish Commission.

Finally, and of major concern, would be the real danger to the Town's most important natural and economic resources…Ogunquit Beach and Ogunquit River. Raw sewerage containing serious biological contaminants invading these public swimming areas would effectively shut down Southern Maine's most popular resort area.

Funding for a proposed plan of SLR protection for the main sewerage plant of the OSD and associated pumping stations is positively supported by the Ogunquit Conservation Commission.

Thank you.

Michael Horn
Chairman, Ogunquit Conservation Commission

Rachel Carson National Wildlife Refuge
321 Port Road
Wells, Maine 04090

November 3, 2011

Sirs

The U. S. Fish and Wildlife Service, Rachel Carson National Wildlife Refuge is pleased to write in support for the proposed sea level rise impact study on the Ogunquit Sewer Treatment Plant. The wildlife refuge is located immediately adjacent to the plant, as is the estuary. Flooding of the plant would have direct detrimental effects on these nationally significant wildlife lands.

Maine Geological Services and the Southern Maine Regional Planning Council have emerged as leaders in climate change, sea level rise communications. Rachel Carson NWR is pleased to be a partner in looking for solutions.

Sincerely,

Ward Feurt
Refuge Manager

Climate change is real. Human activity is accelerating plant warming. FWS is responding with information and solutions. We must work together now to avoid catastrophe later.